

SPECIALPRESS



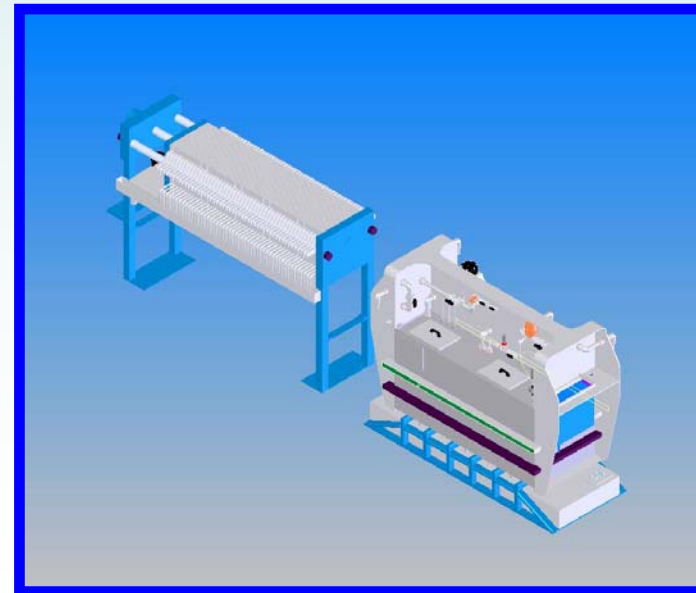
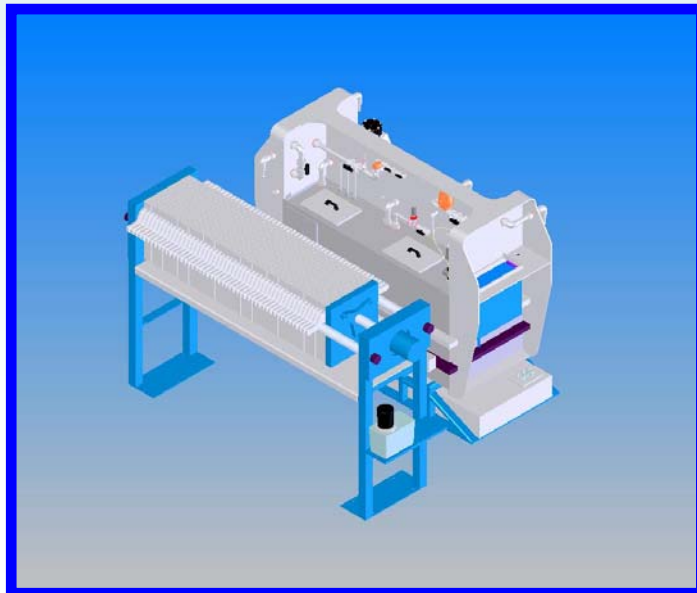
**CLEAN THE FLUX, RINSING
AND STRIPPING SOLUTIONS
AND SAVE MONEY !**



- SPECIALPRESS – compact, easy and safe

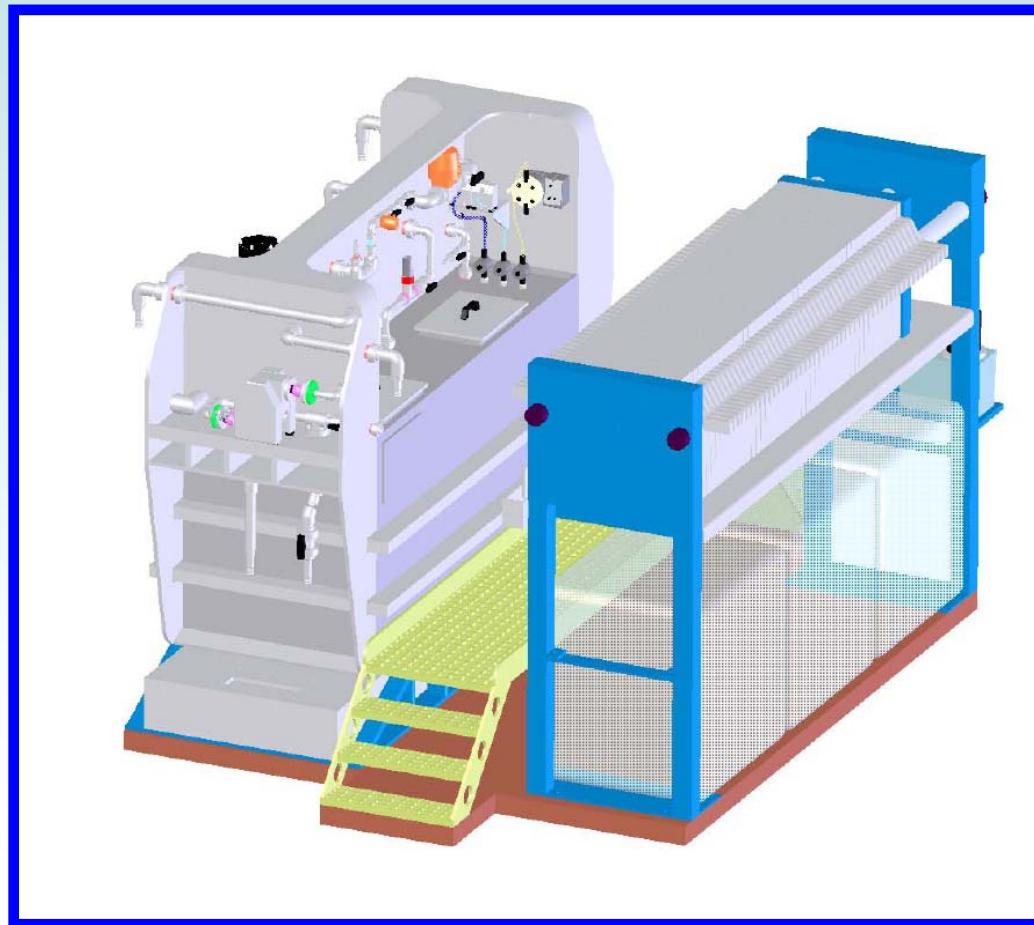
Special Press, skid mounted unit specially designed for the cleaning of flux, rinsing and stripping solutions

Special Press selectively removes iron from a flux solution. In this way, the iron and organics content in the flux solution is dramatically reduced. For the modification of the double salt concentration of the flux solution, ZnCl₂ from the stripping solution can be used.





- SPECIALPRESS – compact, easy and safe





- SPECIALPRESS – The advantages

- Strong reduction of zinc ash and dross production
- Reduction of disposal volume of stripping acid and flux solution
- Reduction in chemicals and zinc consumption
- Reduction of fume production during galvanizing
- Increase in quality of the galvanized material

- SPECIALPRESS – compact easy and safe



- The skid concept permits an easy positioning in any area of the HDG plant
- The unit doesn't need extra building works for the positioning
- The compact design of the unit reduce the space required for the installation
- The recovery tanks required for avoiding any risk of leakage are included in the optimized skid mounted geometry
- The positioning of the pumps is optimized for easy and fast controls and maintenance
- Minimized metal materials use
- No corrosion risk
- Safe conditions for the operators

- SPECIALPRESS – Process description -1-



The **Special Press** is linked to the flux bath by means of mechanically and chemically suitable

Oxidation/neutralization

The flux solution is pumped into the reaction tank by means of a connected to the flux bath by piping. Hydrogen peroxide is added to the flux solution in order to oxidize Fe^{2+} to Fe^{3+} .

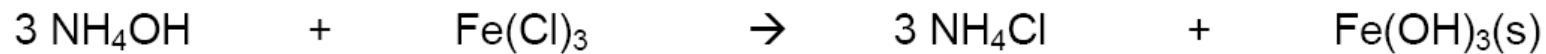
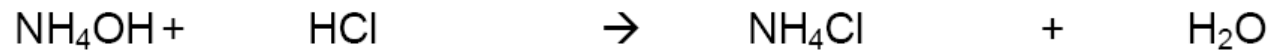
Ammonia is added to the flux solution when the pH falls below 3.0, as iron(III)hydroxide precipitates at $\text{pH} = 2.5$.

At the same time it is possible to add strip acid solution, ZnCl_2 , to the flux solution.

- SPECIALPRESS – Process description -2-



CHEMICAL REACTIONS:



- SPECIALPRESS – Process description -3-



Sludge

From the reaction tank, the neutralized solution flows into the sludge tank. The iron(III)hydroxide precipitation is given time to settle. The flux solution, including a considerable amount of iron(III)hydroxide precipitated, is pumped through the filter press. The iron(III)hydroxide precipitated is filtered off by the filter press. The filtered off iron(III)hydroxide is collected as filter cake in big bags.

Filtrate

The filtrate flows from the filter press into the filtrate tank. A pump returns the filtrate via the connected piping to the flux bath.

- SPECIALPRESS –

Performance guarantees



- Duration of a cycle: less than 24 hours
- Fe removed / cycle: > 100 kg
- Flow of flux liquid: 3,0 m³/hour max
- pH of filtrate: > 2,5

- SPECIALPRESS – economic considerations



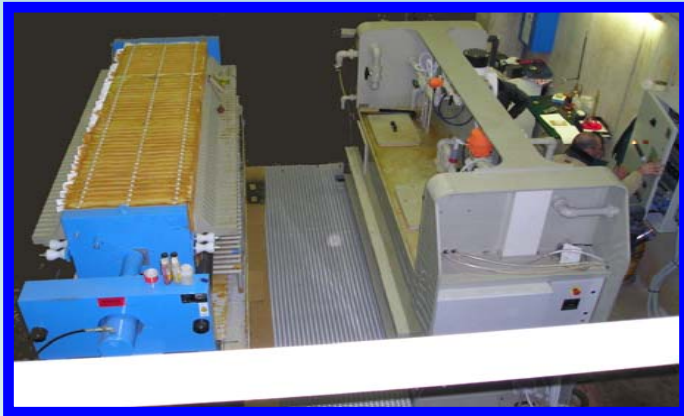
- No flux solution disposal costs, excluding the sludge disposal costs
- The use of the stripping solutions permits to reduce to ZERO the consumption of double salts
- Reduction of the stripping solution volumes disposed
- The removal of iron and organics reduces the defects of galvanizing
- Reduction of dross and ashes production

- SPECIALPRESS – economic considerations



The pay back of the investment for a medium size plant, 30.000 tons/y of HDG material, is less than 2 year.

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